

REMARKS

The Office Action dated January 22, 2007 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1-31 are respectfully submitted for consideration.

Applicants respectfully submit that the finality of the present Office Action is premature. MPEP 706.07(a) states that second or any subsequent actions on the merits shall be made final, except where the examiner introduces a new ground of rejections that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c). In the present case, the new grounds of rejections were necessitated by the fact that the reference EP 1392075 to Hwang et al. (Hwang) cited in the June 28, 2006 Office Action, was improper. The new grounds of rejections in the present Office Action were thus necessitated by the invalidity of the applied reference, and not necessitated because of amendments to the claims submitted in the Response that was filed on September 21, 2006. The amendments that were made in the September 21st Response did not change the scope of the pending claims, and served to more clearly define features that already existed in the present claims. Thus, the present Office Action is not a "second or subsequent Office Action on the merits" as stated in MPEP 706.07(a). Therefore, in the event that the present application is not now in condition for allowance, Applicants respectfully request a new Office Action on the merits.

The Office Action rejected claims 1, 7-13, 16-24, 26-28, 30 and 31 under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,374,112 to Widegren et al. (Widegren). This rejection is respectfully traversed.

Claim 1, from which claims 2-18 depend, is directed to a method for performing multicast transmission in a cellular network. A multicast service notification is transmitted to a certain multicast group, the notification is to inform of an upcoming multicast session. The multicast service notification is received in mobile stations belonging to the multicast group. In response to the receiving the multicast service notification, a moment for a response to the multicast service notification in the mobile stations is selected. A presence report is sent from at least one of the mobile stations at the response moment of the at least one mobile station. The presence report(s) are received in a radio access network. Radio resources are set up for multicast transmission in a cell of the cellular network, when the presence report(s) received in the cell meet(s) predetermined criteria. The multicast data is transmitted using the radio resources set up for the multicast transmission. The cellular network includes mobile stations (MS).

Claim 19, from which claims 20-26 depend, is directed to a system for performing multicast transmission in a cellular network. A radio access network is configured to transmit a multicast service notification to mobile stations belonging to a multicast group. In the mobile stations, a selection unit is configured to select a moment for a response to said multicast service notification and for sending a presence report to the radio access network when the response moment arrives, whereby the radio access network is further

configured to receive the presence reports. An establishing unit is configured to establish radio resources for the multicast transmission in individual cells of the cellular network, the establishing unit being configured to establish the radio resources for a cell when the presence report(s) received in the cell meet(s) predetermined criteria.

Claim 27, from which claims 28 and 29 depend, is directed to a mobile station for a cellular network. A reception unit is configured to receive a multicast service notification informing of an upcoming multicast session. A response unit is configured to select a moment for a response to the multicast service notification and for sending a presence report at the response moment, the presence report indicating the willingness of the mobile station to receive the multicast service. The reception unit is configured to receive a notification informing of a presence report sent by another mobile station.

Claim 30 is directed to system for performing multicast transmission in a cellular network. A radio access network is adapted to transmit a multicast service notification to mobile stations belonging to a multicast group. In the mobile stations, a first means selects a moment for a response to the multicast service notification and sends a presence report to the radio access network when the response moment arrives, whereby the radio access network is adapted to receive the presence reports. A second means establishes radio resources for the multicast transmission in individual cells of the cellular network, the second means being adapted to establish the radio resources for a cell when the presence report(s) received in the cell meet(s) predetermined criteria.

Claim 31 is directed to a mobile station for a cellular network. A reception means receives a multicast service notification informing of an upcoming multicast session. A response means selects a moment for a response to the multicast service notification and sends a presence report at the response moment, the presence report indicating the willingness of the mobile station to receive the multicast service. The reception means are adapted to receive a notification informing of a presence report sent by another mobile station.

According to certain embodiments, the present invention provides a mechanism for providing a multicast service in a cellular network so that the resources allocated for the service correspond to the real need in the network and so that excessive signaling on the uplink channels can be avoided in the start-up phase of the service. This is accomplished by utilizing service notifications sent to the members of the multicast group in order to inform them of an upcoming multicast session. Upon receiving the service notification, a mobile station belonging to the multicast group determines the moment for sending a response to the notification. The response moments of the mobile stations can be spread over a certain period so that only one or a few of said mobile stations give an immediate response to the network. Radio resources are established in cells when the responses received meet desired criteria, and the service is delivered through the resources established. The responses are also termed “presence reports”, since a response indicates that the corresponding member of the multicast group is present in the cell.

Applicants respectfully submit that each of the pending claims recites features that are neither disclosed nor suggested in Widegren.

Widegren describes a system for allocating radio resources in a UMTS system. The objective in the Widegren system is to allocate resources when a service node requires communication with a mobile station. This is accomplished so that a service node requests a radio access bearer from the (UT)RAN rather than a specific radio channel resource. A radio access bearer is a logical connection through the (UT)RAN and over the radio air interface and one or more parameters accompany a radio access bearer request sent from the service node. The (UT)RAN establishes the radio access bearer, i.e. the logical connection, and maps it to physical transport and radio channel resources based on the parameter(s). The mapping involves the selection of the type of channel to be used. For example, when the quality of service requested in the radio access bearer request is high, a dedicated channel may be chosen, whereas a common channel may be selected when the quality of service requested is lower.

Applicants respectfully submit that Widegren fails to disclose or suggest at least the features of a multicast service notification transmitted to a certain multicast group, the notification is to inform of an upcoming multicast session, and, the multicast service notification is received in mobile stations belonging to the multicast group, as recited in claim 1 and similarly recited in claims 19, 27, 30 and 31. Widegren, in particular, the portions cited in the Office Action, merely describes radio communications between the

base stations and the mobile radio stations. Widegren does not mention that the mobile radio stations 30 belong to a multicast group. See col. 1 lines 50-55, Figs. 1 and 3.

Further, Applicants submit that Widegren fails to disclose or suggest at least the feature of a presence report sent from at least one of the mobile stations at the response moment of the at least one mobile station; the presence report(s) are received in a radio access network; and radio resources are set up for multicast transmission in a cell of the cellular network, when the presence report(s) received in the cell meet(s) predetermined criteria, as recited in claim 1 and similarly recited in claims 19, 27, 30 and 31.

Widegren relates solely on the problem of how to efficiently allocate resources for a connection between a core network node and a mobile station. In the system described in Widegren the radio resources are set up in the RAN based on the parameters associated with the radio access bearer request received from a core network node. The RAN does not communicate with a mobile station when setting up the resources. Consequently, Widegren does not in any way suggest the above idea of using presence reports whose transmissions may be spread over a wider time window by using mobile-specific response moments for the reports, as recited in the claimed invention. In other words, in the system described in Widegren, the RAN and the mobile stations do not communicate when the service is initiated.

Additionally, MPEP 2131 states that “to anticipate a claim, the reference must teach every element of the claim.” This principle has been stated by the Federal Circuit; “A claim is anticipated only if each and every element asset forth in the claim is found,

either expressly or inherently described in a single prior art reference.” Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). However, the Office Action essentially does not address the element of “the multicast service notification is received in mobile stations belonging to the multicast group”, because it took the position that Widegren’s mention of radio communications between the base station and mobile radio stations is similar to the claimed multiservice notification to mobile stations belonging to a multicast group. For the reasons set forth above, Applicants respectfully submit that Widegren fails to disclose or suggest all of the features of claims 1, 19, 27, 30 and 31.

Applicants further submit that because claims 7-13, 16-18, 20-24, 26 and 28 depend from claims 1, 19 and 27, these claims are allowable at least for the same reasons as claims 1, 19 and 27, as well as for the additional features recited in these dependent claims.

Based at least on the above, Applicants respectfully submit that Widegren fails to disclose or suggest all of the features of claims 1, 7-13, 16-24, 26-28, 30 and 31. Accordingly, withdrawal of the rejection under 35 U.S.C. 102(e) is respectfully requested.

The Office Action rejected claims 2-6, 14, 15, 25, and 29 under 35 U.S.C. 103(a) as being obvious over Widegren in view of US Patent Publication No. 2002/0106985 to Sato et al. (Sato). The Office Action took the position that Widegren disclosed all of the features of these claims except time periods and time elapses in a MBMS. The Office

Action asserted that Sato disclosed this feature. Applicants respectfully submit that the cited references, taken individually or in combination, fail to disclose or suggest all of the features of any of the above claims. Specifically, Widegren is deficient at least for the reasons discussed above regarding claims 1, 19 and 27 and Sato fails to cure these deficiencies.

Widegren is discussed above. Sato et al. discloses a system for providing multicast services, in which a radio terminal is provided with service continuation requesting means, which transmit a service continuation request signal to an information distribution apparatus for requesting continuation of multicast information distribution service. The Office Action cites paragraphs 0004 and 0005, which describe a communication system according to IGMP, in which a router broadcasts a query periodically while broadcasting multicast information. A host that receives the query, monitors as to whether a response from another host is received within a random time. If this is the case, the host maintains reception condition. However, if no response is received from another host, the said host transmits itself a response to the router (and the other host) so as to continue the multicast service. Thus, Sato merely describes the operation of the service providing system during the service, not the initiation of the service as recited in the presently claimed invention.

Further, because Sato fails to disclose or suggest the features of a multicast service notification is transmitted to a certain multicast group, the notification is to inform of an upcoming multicast session, and the multicast service notification is received in mobile stations belonging to the multicast group, Sato fails to cure the deficiencies of Widegren.

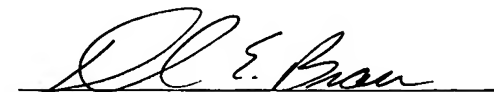
Based at least on the above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the features of claims 2-6, 14, 15, 25, and 29. Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

Applicants respectfully submit that each of claims 1-31 recites features that are neither disclosed nor suggested in any of the cited references. Accordingly, it is respectfully requested that each of claims 1-31 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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